REMARKS

The Office Action dated November 9, 2006, has been carefully reviewed and the foregoing amendment and following remarks have been made in consequence thereof.

Claims 1-33 are pending in this application. It is respectfully submitted that the pending claims define allowable subject matter.

Paragraph [0005] of the specification is amended to correct a typographical error, and paragraph [0007] of the specification is amended to correct the name of the inventor of the cited patent. Further, a number has been added to claim 25 to correct for the omission of the numerical sequence. No new matter has been added.

The rejection of Claims 1-33, under 35 U.S.C. § 103 as being unpatentable over the combined teachings of Newman (U.S. Patent No. 6,544,175), hereinafter "Newman" and Savord et al. (U.S. Patent No. 5,993,390), hereinafter "Savord" is respectfully traversed. It is respectfully submitted that the prior art to Newman, alone or in combination with the additional applied reference to Savord fails to anticipate or render obvious the claimed invention(s). It is respectfully submitted that this rejection is improper hindsight reconstruction and that no legitimate reasons would have existed to motivate the person of ordinary skill at the time of applicant's invention to combine unrelated aspects of the diverse teachings of the two (2) applied references in a manner that would arrive at the claimed invention. The person of ordinary skill would not have been motivated to combine Newman and Savord to arrive at Applicant's claimed invention.

Applicant submits that the outstanding Office Action has failed to set forth prima facie cases of obviousness with respect to claims 1-33. First regarding independent claims 1, 17, and 26:

Claim 1 recites a medical imaging system including "an image sensor receiving imaging signals from a region of interest, ...a memory coupled to the image sensor" where the memory stores image data derived from imaging signals..." The image data have a "first image data for a first sub-region of the region of interest acquired during a first occurrence of a physiologic cycle;

and second image data for a second sub-region of the region of interest acquired during a second occurrence of the physiologic cycle." The system further includes "a processor coupled to the memory for initiating display of the first image data while the second image data is being acquired, and for initiating display of the first image data joined with the second image data after the second image data is acquired."

In addition, Claim 17 recites a medical imaging system including an image sensor for receiving imaging signals from a region of interest, a memory coupled to the image sensor, and a processor coupled to the memory for initiating display. "...[T]he memory storing image data derived from the imaging signals for a first and second sub-region, where the image data comprise: a first series of first sub-region images, each acquired during a first occurrence of a physiologic cycle; a second series of second sub-region images, each acquired during a second occurrence of the physiologic cycle..." The "processor coupled to the memory for initiating display, while at least one of the second sub-region images is being acquired, of a selected first sub-region image joined with a selected second sub-region image in accordance with temporal proximity between the selected first sub-region image and the selected second sub-region image."

Furthermore, Claim 26 recites a method for medical imaging including the steps of receiving at an image sensor imaging signals from a region of interest; storing in a memory image data derived from the imaging signals, and initiating display of the fist image data. The image data including a "first image data for a first sub-region of the region of interest acquired during a first occurrence of a physiologic cycle; and second image data for a second sub-region of the region of interest acquired during a second occurrence of the physiologic cycle..." The step of initiating display of the first image data performed "...while the second image data is being acquired..." or the first image data "...joined with the second image data after the second image data is acquired."

Newman teaches an ultrasound imaging system that causes a transducer to output ultrasonic signals in a series of frames in an interleaved manner. The image is constructed from a series of interlaced sub-volumes that form a matrix of data in memory that holds the entire volume of data. (See column 5, lines 16-20).

Savord teaches an ultrasound imaging system where the image data acquisition may be synchronized to a selected phase of the patient's cardiac cycle so the image represents the image volume at the selected phase, and image data for a three-dimensional volume segment may be acquired during each of the cardiac phases of a cardiac cycle. When image data for all volume segments of the image volume have been acquired, the volume segment image data is combined to provide a composite image for each of the cardiac phases. (See Column 8, lines 31-34).

Neither Newman nor Savord, considered alone or in combination, describe or suggest displaying a joined image of the first sub-volume joined with the second sub-volume after the second image data is acquired as recited in Claims 1, 17 and 26. Instead, Newman teaches displaying interlaced data that includes showing one sub-volume followed by another sub-volume. Furthermore, Newman overwrites the previously obtained data with the new data and does not display an image of joined sub-volumes of data. In contrast, the claimed invention displays a joined image of two sub-volumes. Savord does not correct the deficiencies of Newman. Savord waits until all the sub-volumes have been acquired and then provides a composite image of all the sub-volumes. Thus, Savord does not join two sub-volumes of data while acquiring the next sub-volume of data. Accordingly, Claims 1, 17, and 26 are submitted as patentable over Newman in view of Savord.

Claims 2-16 depend from independent Claim 1 which is submitted to be in condition for allowance. Further, it is respectfully submitted that the dependent claims recite additional features that are neither anticipated nor rendered obvious by the prior art. Therefore, when the recitations of Claims 2-16 are considered in combination with the recitations of Claim 1, Applicant submits that dependent Claims 2-16 are also patentable over the cited prior art.

Claims 18-24 depend from independent Claim 17 which is submitted to be in condition for allowance. Further, it is respectfully submitted that the dependent claims recite additional features that are neither anticipated nor rendered obvious by the prior art. Therefore, when the recitations of Claims 18-24 are considered in combination with the recitations of Claim 17, Applicant submits that dependent Claims 18-24 are also patentable over the cited prior art.

Claims 27-33 depend from independent Claim 26 which is submitted to be in condition for allowance. Further, it is respectfully submitted that the dependent claims recite additional

features that are neither anticipated nor rendered obvious by the prior art. Therefore, when the recitations of Claims 27-33 are considered in combination with the recitations of Claim 26, Applicant submits that dependent Claims 27-33 are also patentable over the cited prior art.

For at least the reasons as set forth above, Applicant respectfully requests that the 35 U.S.C. § 103(a) rejection of Claims 1-33 be withdrawn.

In view of the foregoing amendments and remarks, all the claims now active in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited. Should anything remain in order to place the present application in condition for allowance, the Examiner is kindly invited to contact the undersigned at the telephone number listed below.

Respectfully Submitted,

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